Programming the MIC841 Thresholds

EQUATION 1:

$$V_{IN(LO)} = V_{ref} \times \frac{R_1 + R_2 + R_3}{R_2 + R_3}$$

with

$$V_{ref} = 1.24\,V$$

EQUATION 2:

$$V_{IN(HI)} = V_{ref} \times \frac{R_1 + R_2 + R_3}{R_3}$$

with

$$V_{ref} = 1.24\,V$$

Resolution

$$R1 + R2 + R3 = Rtot \leq 1M$$

```
format shortEng;

Rtot = 1000000;          % Ohm
Vref = 1.24;             % Volt

Vin_HI = 9.50;
Vin_LO = 9;

R3 = Vref*Rtot/Vin_HI
```

```
R3 =
   130.5263e+003
```

```
R2 = Vref*(Rtot/Vin_LO)-R3
```

```
R2 =
     7.2515e+003
```

```
R1 = Rtot - R2 - R3
```

```
R1 =
   862.2222e+003
```

Check results

```
Vin = 10;
vthL = ((R2 + R3)/Rtot)*Vin
```

```
vthL =
     1.3778e+000
```

```
VthH = ( R3/Rtot)*Vin
```

```
VthH =
     1.3053e+000
```

Threshold check

```
r1 = 866000;
r2 = 7320;
r3 = 130000;
rtot = r1 + r2 + r3;

Vhigh = (rtot/r3)*1.24
```

```
Vhigh =
     9.5701e+000
```

```
Vlow = (rtot/(r2+r3))*1.24
```

```
Vlow =
     9.0600e+000
```